


SECRET

Date: 16 September 1964


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TO: 
THROUGH:
FROM:
SUBJECT: Research Activity Notice

SUBJECT: Climatic and Soil Data

PROBLEM: To summarize climatic and soil data on conditions affecting construction costs at Omsk, Perm, Saratov, Tbilisi, Ufa, and Zaporozhe.

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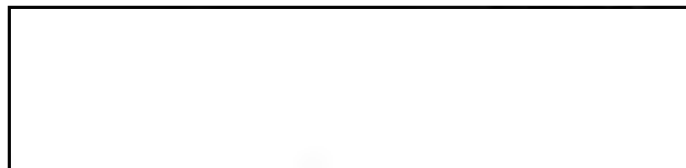
REQUESTER: 
ANALYST:

COORDINATION WITH OR AID FROM OTHER UNITS: None

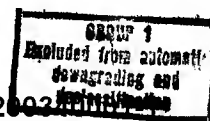
DUE DATE: Omsk by 5 October 1964; others at two-week intervals.

APPLICABLE PROJECT NO. (if any): 64.1726 C

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15 September 1964

THRU :



Request for "Climatic and Soil Data" reports

REF : CIA/RR GB 64-16, dated May 1964

1. Information similar to that provided on Kuybyshev in the above referenced report is required for studies of guided missile facilities at:

Omsk

Perm

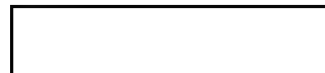
Saratov

Tbilisi

Ufa

Zaporozh'e

2. The studies are required in the order listed. Please forward each study as completed.

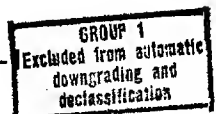


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C-O-N-F-I-D-E-N-T-I-A-L

CIA/RR GB 64-38
October 1964

CLIMATIC AND SOIL DATA ON OMSK

(54°58'N-73°24'E)

I. Climate

Omsk has a dry continental climate, characterized by short, warm summers and long, cold winters, somewhat analogous to the climate of the northern Great Plains region of the United States. Precipitation is generally heaviest in the summer. Snowfall is light, but the snow cover persists almost half the year.

Surface temperatures have a wide annual range. In July the average daily maximum and minimum temperatures (see Table 1) are 74°F and 56°F, respectively, but extremes of 102°F and 38°F have been recorded. Winters in Omsk are severe, with the following temperatures recorded for January, the coldest month: average daily minimum -14°F, absolute minimum -56°F, average daily maximum -1°F, and absolute maximum 35°F. The average minimum temperature is below freezing from October through April, and freezing temperatures have been recorded in every month except July and August.

The average annual precipitation is 13.5 inches, about 70 percent of which occurs during late spring and summer (May through September) in the form of showers and thunderstorms (see Table 2). The monthly maximum occurs in July, with an average of 2.8 inches and an absolute maximum of 5.4 inches. Precipitation is most frequent in June and July, when thunderstorms occur on the average of 6 or 7 days a month. February has the least precipitation, with an average of 0.3 inch and a maximum of 0.7 inch. Snow falls from September through May, with the greatest frequency in December. The snow cover generally lasts from late October to mid-April and accumulates to an average maximum depth of 12.4 inches. Ice fogs and blizzards occur in winter.

During an average winter the ground freezes to a depth of about 4 feet, but in severe winters the ground may freeze to a maximum depth of nearly 9 feet. The ground begins to freeze in early November and to thaw in mid-April. Muddy conditions generally prevail in April and part of May, when the surface layer of the ground thaws and the subsurface remains frozen.

C-O-N-F-I-D-E-N-T-I-A-L

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Table 1

Temperature
(in degrees Fahrenheit)

	Average Daily Maximum	Average Daily Minimum	Absolute Maximum	Absolute Minimum
January	-1	-14	35	-56
February	6	-9	37	-45
March	19	0	59	-39
April	39	21	84	-13
May	59	40	95	10
June	69	51	99	31
July	74	56	102	38
August	70	52	95	35
September	60	41	88	22
October	40	27	72	-2
November	18	8	49	-40
December	5	-7	36	-48
Annual	38	22	102	-56
Length of record (in years)	22	19	30	23

Average daily temperature a/ exceeds:

32 -- 15 April to 20 October (188 days)

41 -- 27 April to 5 October (161 days)

50 -- 13 May to 17 September (127 days)

59 -- 3 June to 22 August (80 days)

a. Length of record not known.

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Table 2

Precipitation

	Average Precipitation (inches)	Average Number of Days With Thunderstorms	Average Number of Days With Snowfall
January.	0.5	0	7
February	0.3	0	6
March	0.4	0	5
April	0.7	< 0.5	4
May	1.1	2	2
June	2.2	6	0
July	2.8	7	0
August	2.1	4	0
September	1.3	1	< 0.5
October	0.8	< 0.5	6
November	0.7	0	7
December	0.6	0	10
Annual	13.5	20	47
Length of record (in years)	47.0	19	10

Average number of days a year with snow cover: 157 a/

Average date of first snow cover: 24 October a/

Average date of disappearance of snow cover: 10 April a/

Average maximum depth of snow cover (based on 10-day period
of greatest depth): 12.4 inches a/

a. Length of record not known.

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II. Soils

Most of the urban area of Omsk is located on high, undulating terrain that rises 50 to 150 feet above the Irtysh River. The Omsk aircraft plants are located about 2 miles east of the river on sandy land roughly 150 feet above the river.

The entire area is underlain by alluvial sediments, unconsolidated or poorly consolidated, to a depth of at least 300 feet. The upper layer generally consists of poorly graded sand and silty sand up to 50 feet thick. This upper layer is underlain successively by silty or sandy clay less than 15 feet thick, by compact clay 10 to 85 feet thick, and by weak, generally saturated, sand, silt, and clay sediments to depths of 300 to 500 feet.

Foundation conditions for surface installations below the level of frost penetration (absolute maximum of almost 9 feet) vary from poor to good, depending on the degree of compaction, for the characteristic sand and silty sand deposits in the area of the aircraft plant. The drainage problems involved in surface construction are seasonal, as the water table varies from near the surface in April and May to as much as 50 feet below the surface in summer and fall. Deep excavations in the underlying saturated sediments would generally involve difficult problems of support and stabilization, except where compact clays are encountered.

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Approved For Release 2002/05/16 : CIA-RDP79T01019A000200340001-1

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Title of Report CLIMATIC AND SOIL DATA ON OMSK

Date October 64

Classification CONFIDENTIAL

(54°58'N-73°24'E)

Report No. CIA/RR GB 64-38 PN 64.1726C

25X1A Requester

25X1A Analyst/Branch

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